

Future Flight Design			
2002 Science and Technology			
Academic Standards			
Pennsylvania Science and Technology			
Grade 7			
Activity/Lesson	State	Standards	
Air Transportation Problem	PA	SCT.7.3.2.7.B.5	Interpret data, formulate models, design models, and produce solutions.
Air Transportation Problem	PA	SCT.7.3.2.7.C.6	Communicate appropriate conclusions from the experiment.
Air Transportation Problem	PA	SCT.7.3.6.7.B.4	Apply the appropriate method of communications technology to communicate a thought.
Air Transportation Problem	PA	SCT.7.3.6.7.C.8	Explain transportation technologies of propelling, structuring, suspending, guiding, controlling and supporting.
Air Transportation Problem	PA	SCT.7.3.6.7.C.10	Model and explain examples of vehicular propulsion, control, guidance, structure and suspension systems.
Air Transportation Problem	PA	SCT.7.3.6.7.C.11	Explain the limitations of land, marine, air and space transportation systems.
Air Transportation Problem	PA	SCT.7.3.7.7.C.1	Know specialized computer applications used in the community.
Air Transportation Problem	PA	SCT.7.3.7.7.D.2	Identify and solve basic software problems relevant to specific software applications.
Air Transportation Problem	PA	SCT.7.3.7.7.D.3	Identify basic multimedia applications.
Air Transportation Problem	PA	SCT.7.3.7.7.D.4	Demonstrate a basic knowledge of desktop publishing applications.
Air Transportation Problem	PA	SCT.7.3.7.7.D.6	Apply basic graphic manipulation techniques.
Air Transportation Problem	PA	SCT.7.3.8.7.A.3	Identify and explain improvements in transportation, health, sanitation and communications as a result of advancements in science and technology and how they effect our lives.
Aircraft Design Problem	PA	SCT.7.3.1.7.A.2	Explain the importance of order in a system.
Aircraft Design Problem	PA	SCT.7.3.1.7.A.5	Apply systems analysis to solve problems.
Aircraft Design Problem	PA	SCT.7.3.4.7.C.3	Explain various motions using models.
Aircraft Design Problem	PA	SCT.7.3.6.7.A.3	Explain the factors that were taken into consideration when a specific object was designed.
Aircraft Design Problem	PA	SCT.7.3.6.7.C.6	Explain the difference between design engineering and production engineering processes.
Aircraft Design Problem	PA	SCT.7.3.6.7.C.9	Identify and explain the workings of several mechanical power systems.
Aircraft Design Problem	PA	SCT.7.3.6.7.C.11	Explain the limitations of land, marine, air and space transportation systems.

Aircraft Design Problem	PA	SCT.7.3.7.7.A.1	Identify uses of tools, machines, materials, information, people, money, energy and time that meet specific design criteria.
Aircraft Design Problem	PA	SCT.7.3.8.7.A.1	Identify and describe the unavoidable constraints of technological design.
Aircraft Design Problem	PA	SCT.7.3.8.7.B.1	Identify interrelationships between systems and resources.